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S. H. Emmens

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WHAT WE HOPE TO HEAR FROM SIR WILLIAM CROOKES, F. R. S., ON THE OCCASION OF HIS PRESIDENTIAL ADDRESS TO THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, AT BRISTOL.

AN OPEN LETTER.

TO THE PRESIDENT-ELECT OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Sir Knight and Brother in Science:

On the 8th of January of the present year you wrote to me as follows:

"You evidently do not know me, or you would not think I should be influenced in the slightest degree by the motives you hypothetically assign to me, in avowing my convictions of the truth of any phenomenon that I had had full opportunity of investigating. I unfortunately have no English copy of my works on Spiritualism handy, but I send a French translation of them, which will show you how far I had got. I have never ceased to avow my belief in what I vouched for then, and I am always on the look-out for fresh opportunities of investigating the subject. I was elected President some years ago of the Society for Psychical Research—a society specially formed to go into these subjects in a systematic and scientific manner—and I have just consented to retain the Presidency for another term, my first term having expired at the end of the year. I send you a copy of the address I gave the society last year, and am now thinking about subjects for my next address. You know that I am President-elect of the British Association, and I am discussing with many scientific men how it will be possible to bring into the address some of the better-proved phenomena of Psychical research, such as telepathy, clairvoyance, and the like. Of course, I can do as I like in a certain way, but it will not be advisable to drag in

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subjects which are considered outside the province of the B. A.

"At all meetings where men of science congregate, whenever occult subjects are mentioned, I never shrink from giving my opinions, and I am glad to find that they are always listened to with courtesy and respect, and such an idea as my having dropped the subject never enters my own mind or those of my hearers. There are too many well-known men of science who believe in these things now to make it in the least degree impolitic or inexpedient (to descend to a low motive) for me to express my convictions. It is not I who have changed in 20 years, *but the attitude of men of science*, and therefore your opinion, that I have been pardoned by the R. S. on condition that I will not again commit heresies, will not hold good, for I am as heretical as ever, judged by the old standard.

"I saw your letter in the *Daily Chronicle*. You will excuse me for saying I do not like the tone of it. You speak of yourself as a man of science. Why, therefore, go out of your way to sneer at the order to which it is a fair inference you wish to be considered a part?

"I am as sure you are as wildly wrong in your opinion of men of science generally, as you are of that unimportant unit in the order who subscribe himself, very truly yours."

The foregoing was written by you to me in reply to a letter I had sent to you on Dec. 26th, 1897, which ran as follows:

"I think too highly of your good sense to suppose you will feel any vexation or even annoyance at the following remarks and questions:

"The day before yesterday I received a very cordial letter from the Comte de Rochas, saying "J'ai moi-même deja fait des essais, où sous l'influence de la pression et de l'azote, j'ai obtenu un metal intermediaire entre l'argent et l'or comme densité, insoluble dans acide azotique, mais n'ayant pas la couleur de l'or." ["I have myself made some experiments, wherein, under the influence of pressure and nitrogen, I obtained a metal intermediary between silver and gold as to density, insoluble in nitric acid, but not having the color of gold."] Accompanying this letter there came a copy of one of de Rochas' books, "L'Exteriorisation de la Motricité," in which I find an account

of *your* investigations into the phenomena produced by or through D. D. Home. In this account your book "Recherches sur les phénomênes du spiritualisme" is referred to as containing the following passage: "Home était un homme d'une exquise politesse, et d'une loyauté au-dessus de tout soupçon. Mais pour ceux qui ne le connaissaient pas, c'était un charlatan; quant à ceux qui croyaient en lui, ils etaient traités de fous ou peu s'en faut." ["Home was exquisitely polite and his good faith was beyond suspicion. But those who knew him not esteemed him a charlatan; and the persons who believed in him were looked upon as being insane or nearly so."]

I have also very recently received, by way of sample, "La Revue Spirite" for last October. At page 593 of this I find the following passage: "Il est certain que Miss Cook désirait l'appui du savant M. W. Crookes; elle l'obtint, comme on le sait, et trouva en lui un ardent défenseur. Tout d'abord, l'opinion générale crut trouver dans M. Crookes un démolisseur du spiritisme, et on acclama cette décision avec une grande joie, pensant qu'il découvrirait le secret de toutes les mystifications; ce serait la ruine des croyances absurdes que les spirites pretendait être la verité. Mais il ne devait pas en être ainsi! à la stupefaction de tous, M. W. Crookes conclut dans le sens affirmatif, tout etait vrai. On dut accepter, bon gré mal gré, les faits prouvés scientifiquement. Aussitôt le vent tourna: *le savant si glorifié au début fut couvert de railleries et d'épithètes mal sonnantes.*"

["Certain is it that Miss Cook wished for the support of M. W. Crookes, the *savant*. She obtained it, as is well known, and found in him an ardent defender. At first the general opinion was that M. Crookes would be found the destroyer of spiritism, and his action was joyously acclaimed, it being thought that he would discover the secret of all the mystifications; which would put an end to the absurd beliefs taught as truth by the spirits. But this did not come to pass. To the stupefaction of every one, M. Crookes came to an affirmative conclusion; all was true. And facts scientifically proved had, willy-willy, to be accepted. The wind immediately changed; the *savant* who had been so glorified at the outset, was now bespattered with ridicule and ill-sounding epithets."]

"My own remembrance of the incidents here alluded to is

very imperfect. I have unfortunately never come across any previous notice or advertisement of the book attributed to you, and was not aware of its existence, or I should certainly have bought and read it. But I have from time to time seen newspaper articles or paragraphs referring to your Home and "Katie King" experiences in terms which were more or less "*mal sonnantes.*" My general impression has been that if your commanding genius and brilliant discoveries had not *enforced* recognition, your scientific brethren of the Royal Society *et hoc omne genus* would have boycotted you for daring to investigate and discover truth in that which their dogmas declared to be impossible and fraudulent.

"It is this, of course, which has faced me when I have considered the expediency or otherwise of your investigating my Argentaurum work. I have said to myself: "The Sir William Crookes of to-day is very different from the Professor Crookes of 1870. He has made his peace with the Royal Society, and has been pardoned his heresy on condition of his never offending in a like manner again, as seems evident from his having dropped the tabooed line of investigation in which he made so good a beginning, and from his having studiously ignored certain questions put to him by myself. He has, now, moreover, much more to lose than he had. A peerage is virtually in sight for him. It is in the gift of men who are statesmen and who therefore cannot call their souls their own. They have to consider popular judgment; and popular judgment in matters scientific is led by the newspapers, who, in their turn, are led by the Professors and Fellows of the Royal Society. Hence the peerage depends upon the views and even the prejudices of the so-called "leaders of science" being respected and swallowed. If, then, these gentry choose to pass the word around that Argentaurum-making is "alchemy," that alchemy has been condemned (without investigation), and that Emmens is therefore a "charlatan," what probability is there of Sir William Crookes caring to again flaunt the flag of heresy and humiliate the Professors and Fellows of to-day by proving them to be what their predecessors have always been, hide-bound, dogmatic, unscientific bigots?"

"Perhaps these epithets are *mal sonnantes.* Be it so. I feel like Rowland Hill, who, when expostulated with concerning

his allowance of profane melodies in his church services replied that he did not see why the Devil should have all the best tunes. At the same time I am ready enough to acknowledge that the bigots in fields removed from dogma are frequently good and great men and do good and great work.

"You may perhaps think I do you an injustice by suggesting your being willing to allow personal advancement the precedence over martyrdom. I do not consider this an injustice. A man's first duty is to himself and his family, consistently, of course, with his not injuring other people and their families. I do not consider you as bound ethically or scientifically, to become the sponsor for any other person's discovery, even though you may be convinced of its reality; and if, after being convinced, you should decide to remain silent rather than to encounter a peerage-endangering storm of censure and ridicule, I, for one, should not blame you. I should think you were acting wisely and properly. There are occasions when self-sacrifice may be grander and nobler than any other course; but I suspect the truest title for Hall Caine's last work would have been "The Fool."

"Again, you may consider that your conversation with the 14 chemists and physicists was conclusive and that I am deluding myself with idle apprehensions. I, however, attach no importance at all to the incident. Your co-diners could hardly be so rude as to tell you to your face that they would not believe you. It was very pretty and polite of the eminent gentleman to assure you that *your* word would, of course, suffice, even for a miracle. But I think I am right in preferring to judge men by their actions rather than by their fine phrases. How many of those very 14 philosophers have refrained from applying "des épithètes mal sonnantes" to you (in newspapers, journals and behind your back) respecting your statements concerniug Katie King? How many of the 14 can you name who will openly admit that you were not duped by Home and Miss Cook, and that your investigations proved psychic force to be a natural fact and not a subjective illusion?

"You should also bear in mind that I have already *proved* these men. Take, for example, Prof. Perry, F. R. S. Read the enclosed particulars of my skirmish with Princeton and the enclosed copy of my additional letter

to Perry. Read the enclosed copy of a letter from Prof. Seth C. Chandler to a heretic in this country. Read (in Argentaurum Papers No. 1) my unanswerable demonstration of defects in the currently accepted doctrine of gravitation, and after considering the important bearing of this revelation upon the whole scope of modern physical science, look around for any pronouncement of any leading man of science or any leading scientific journal upon so vital an issue. Can you wonder that I attach little importance to the mere "politesses" of men who degrade their high office as Professors by continuing to teach doctrines which they dare not look into or defend?

"This time, however, the bigots have reckoned without their host. If I be right as to the artificial production of gold, I obviously command a power which will ere long give me the mastery. Money will checkmate the policy of silence, and will compel the prelates to come out into the open and defend their doctrines. And then, if I be right as to the defects in these doctrines, there will be such a destruction of idols as the scientific world has never seen; and we shall be able to commence the new century by breathing a freer intellectual atmosphere.

"I propose to found a Research Society of world-wide scope. No fees will be exacted; as the contributions of the Argentaurum Syndicate and any persons who desire to aid will suffice for all expenses. No log rolling and mutual-admiration business will take place. Any person, of any country or sex, who has made an important advance in science will, if he or she so desire, be, as a matter of course, elected as a *Fellow* of the Society, and no other persons will be eligible; though everyone who contributes to the finances of the Society will, *ipso facto*, become a *Member*. The action of the Society will be two-fold. First, it will publish a journal, the contents of which will be confined entirely to advances in science made by the Fellows; and every Fellow will, as a matter of course, be entitled to the publication of such advances. Secondly, the Society will at its own expense, undertake special researches, the conduct of which will be intrusted to persons chosen from among its Fellows.

"It seems to me that such a Society has always been and still is greatly needed. Why should natural *facts* have to bow the knee to Dogma and Authority? Why should truth be im-

prisoned and debarred from revealing her face to the world at large? As you yourself seem to have said in the book quoted by M. de Rochas—"Il est réellement pénible qu'un homme tel que D. D. Home, doué de facultés extraordinaires et toujours désireux de se mettre à la disposition des hommes de science, ait vécu tant d'années a Londres, sans que, sauf une ou deux exceptions, une notabilité du monde scientifique ait pensé que vraiment cela valait bien la peine de démontrer la fausseté ou la vérité de ces faits dont on parlait partout." ["It is really painful that a man like D. D. Home, endowed with extraordinary faculties, and always desirious of placing himself at the disposition of men of science, should have lived for so many years in London without (save one or two exceptions) any notability of the scientific world having thought it worth while to demonstrate the falsity or truth of the facts which were being talked of everywhere."]

"P. S. I imagine even the most enduring of camels must feel his back breaking under the last straw (in the form of "a shock to the ether") recently addded to his load by Sir G. Stokes."

On Dec. 29th, I again wrote you, thus:

"Immediately after I had despatched my letter to you of the 26th inst I received a striking confirmation of the views expressed therein. *Nature* of the 16th inst came to hand. It contains a review by Prof W. A. Tilden, F. R. S., of the new edition of Mendeléeff's Chemistry, in which I find the papal utterance 'At the present day the majority of chemists have probably settled down to the belief that our seventy or eighty 'elements' represent *limiting material*, and that, *so far as terrestrial affairs are concerned, so they will always remain.*' And although the worthy prelate admits (having his eye on you and a few others) that a minority of chemists conceive elements to be possibly 'compounded of finer matter,' yet he says, in effect, that even these heretics 'do not expect to rupture the bond which unites the subatomic constituents together by any laboratory process.'

"Now, it is a fair guess that Dr. Tilden was one of the 14 chemists and physicists who politely assured you they would accept transmutation on your certifying the same to be a fact. Yet here we have him subsequently telling the world at large,

and speaking *ex cathedra*, that transmutation is terrestrially impossible. Do you really believe that he will recant, and thus confess himself to have been an egregious bigot, upon the mere word of *anybody?* Will he not demand the clearest and most complete physical demonstration?

"It is also a fair guess that Prof. Oliver J. Lodge, F. R. S., was one of the fourteen. Is he any more open-minded than Tilden? Look at his article in *Nature* of Dec. 9th on "Some Unrecognized Laws of Nature." Were the annals of philosophy ever defaced by a worse exhibition of bigotry and injustice? I know nothing of Singer and Berens, and I find much in their book with which I cannot agree, in addition to some things that are, in my judgment, altogether foolish. But the work is an honest, capable, and, in many respects, meritorious contribution to philosophy, and thus deserves respectful treatment by every man of science, even though he may attack and controvert some of its contents. This evidently is not Lodge's version of *noblesse oblige*. He has stooped to abuse instead of rising to argument: and this F. R. S., this presumed lover of truth and hater of *suggestiones falsi*, has not scrupled to resort to the pitiful trick of quoting isolated passages in order to travesty the work he attacks If then he be one of the majority referred to by Dr. Tilden, how is *he* likely to treat your mere assertion, unsupported by communicable proof, of the facts of nature being opposed to his dogma?

"And, finally, there is your friend, Roberts-Austen. I have a great respect for him. I regard him as one of the best men of science of the day; and I readily accept your estimation of him as a thoroughly "congenial soul." But will he in cold blood repeat to you the assurance that he will accept transmutation on your dictum without being himself convinced by actual demonstration? I doubt his readiness to tell you anything of the kind. I have what I consider to be good reason for the doubt. I think Roberts-Austen will himself admit that if he did indeed join in the post-prandial *politesse*, he has upon other occasions to other people held very different language."

On Jan. 20th I received your letter of the 8th, and I at once wrote you as follows:

"I am delighted to read that you have not dropped 'occult subjects,' and that the 'attitude of men of science' has

'changed' respecting them. But my own observation of what appears in scientific journals shows me that this changed attitude is *esoteric*. I have not yet met with any instance of the Royal Society, or the Académie des Sciences, admitting the existence of a soul or even admitting the existence of non-fraudulent and non-illusory psychical phenomena.

"I am sorry you do not like the tone of my letter in the Daily Chronicle. I freely acknowledge that I am what is called 'a man of science'; and I freely admit that my letter *did* flout 'scientific men' in general. But the real question is Was I *right?* Luther, the papist, did not hesitate to flout his fellows. Wellington, the soldier, did not hesitate to flout the military authorities. Beresford, the sailor, does not hesitate to flout the Lords of the Admiralty. Perry, the F. R. S., does not hesitate to sneer at his brother Fellows for their attitude on the subject of technical education. It is righteous and wholesome to ridicule Pharisaism. Jesus Christ set the example of so doing. He had no hesitation in what the 'nice' people of nowaday call 'going out of his way to say nasty things.' If to speak truth was to give offence he still shrank not from speaking it.

"But I took care to be *just* and *fair* in my allusions to men of science. In paragraph 6 of my letter to the Daily Chronicle I expressed my high appreciation of the attitude assumed by many of the leading philosophers of the day. I therefore properly distinguished between the bigots and the broad-minded men; and unless you are prepared to contend that *no* men of science are bigots, I fail to see how you can be right in saying that I am 'wildly wrong' in my 'opinion of men of science generally.'

"Please bear in mind that I have put many of these philosophers to the proof, and have openly set forth the proof for the contemplation of the scientific world. You tell me you are not individually competent to judge of the matters at issue. You cannot therefore say *I am wrong;* and as no one (in spite of great inducements) has attempted to show error on my part, there is, at least *prima facie* evidence that *I am right.* Will you seriously say that you entertain great respect, even for a Fellow of the Royal Society, when you find him bidding students to accept as firmly-established truth a doctrine which he knows to have been successfully refuted?

"Finally, pray allow me to add that I am not conscious of regarding the scientific world or any section of my fellow-men with any bitter feeling, or otherwise than with perfect good humor. This world, and our lives here, and our little scraps of knowledge, and our successes and failures, are all such small matters that one may well regard them as unimportant. In our next life I suspect we shall be vastly amazed at the pother we made over trifles in this one."

My object in recalling this correspondence to your mind is, if possible, to induce you to take into serious consideration the position in which you now stand with regard to the scientific world.

You have made very grave charges against the leading men of science in England, and they have made very grave charges against you. The public at large is anxious to know on which side stand truth and reason. You have, for this year, been chosen to deliver the great annual scientific Allocution. A listening world hopes to hear at Bristol that you have risen to the height of the occasion, that you have shown yourself a courageous knight, that you have not shirked or evaded the issue, and that you have produced overwhelming evidence for the scientific faith you profess.

Nothing in the whole realm of science is so important as the issue of which you are the knightly champion. It is a factor in every phenomenon of nature. It is essential to the ascertainment and record of every natural law. All that is without it is but tinkling brass and a sounding cymbal. Upon it hangs the well-being in this life and hereafter of every man, woman, child and animal in the world. You cannot be surprised to find that the thinkers of every nation on earth are waiting with bated breath for the utterance of your Sermon on the Mount.

The issue has a name.

It is KATIE KING.

I have said you have made grave charges against the leading men of science in England. Let me prove my words.

You are not only the President-elect of the British Association; you are also the President of the Society for Psychical Research. In the latter capacity you last year pronounced an Allocution to a listening world. It contained, amongst other things, the following sentence:

"Well, it was this attitude of a mind 'to let' which first brought me across D. D. Home, and which led to my getting a glimpse of some important laws of matter and energy of which I fear many of my fellow physicists still prefer to be uncognizant."

What graver charge can be brought against a man of science than to say that he deliberately shuts his eyes to the truth? And, when that man is taking pay for his teaching, you accuse him of personal dishonesty when you say he prefers to be uncognizant of important laws of matter and energy. Prof. J. Perry, F. R. S., of the Royal College of Science, London, and Prof. E. Ray Lankester, F. R. S., of the University of Oxford, are paid for doing their *best* to rightly teach the students they instruct. If they refuse to take cognizance of important laws of matter and energy which have been scientifically demonstrated by you, they are unfaithful to the trust reposed in them.

Again, in the same Allocution you said:—

"Telepathy, the transmission of thought and images directly from one mind to another, without the agency of the recognized organs of sense, is a conception new and strange to science. To judge from the comparative slowness with which the accumulated evidence of our Society penetrates the scientific world, it is, I think, a conception even *scientifically repulsive* to many minds. We have supplied *striking experimental evidence;* but few have been found to repeat our experiments. We have offered *good evidence* in the observation of spontaneous cases—as apparitions at the time of death and the like—but this evidence has failed to impress the scientific world in the same way as evidence less careful and less coherent has often done before. Our evidence is not confronted and rebuked; it is *shirked and evaded*, as though there were some great *a priori* improbability which absolved the world of science from considering it."

To charge a man of science with "shirking and evading evidence" is to call him a traitor to Truth. To speak of a man of science as having a mind that regards telepathy as being a "scientifically repulsive" conception, and that declines to accept "good evidence" in favor of a view opposed to prejudice is only another way of declaring the man to be a "hidebound, dogmatic, unscientific bigot." This, therefore, is what

you call Sir G. G. Stokes, F. R. S., past president of the Royal Society and Lucasian Professor of Mathematics in the University of Cambridge, and Professor W. C. Roberts-Austen, F. R. S., Chemist of the Royal Mint.

Let me refer you to another passage, namely :—

"My next speculation is more difficult and is addressed to those who not only take too terrestrial a view, but who deny the plausibility—nay, the *possibility*—of the existence of an unseen world at all."

Here you are still speaking of the leaders of science in England—your fellow physicists. This is clear from one of your opening paragraphs in which, after referring to the "fellow physicists," you go on to say : "It is this most accessible temper of mind which leads me to follow the problems of the Society of Psychical Research with an interest which, if somewhat calmed by advancing years, and by a perception of the inevitable slowness of discovery, is still as deep a feeling as any which life has left me. And I shall try to utilize this temper of mind to-day, by clearing away, so far as I can, certain presuppositions, on one side or the other, which seem to me to depend upon a too hasty assumption that we know more about the universe than as yet we really can know."

The charge thus brought against many a leader of science is graver than ever. To say that a man of trained intellect denies the *possibility* of aught existing beyond what he can see is to pronounce him a dangerous lunatic, absolutely hidebound, a denier of God, and one who refuses to acknowledge any moral difference between right and wrong.

This is a tremendous and terrible accusation. Yet have you made it. Your allocution delivered in the presence of the Society for Psychical Research last year was no hasty, ill-considered utterance. It had been carefully thought over, committed to paper, and revised time and again. The connotation of the words and phrases employed was apparent to your mind and was deliberately intended by you.

You will not, I feel sure, seek to "explain away" your allusion to men who deny the possibility of an unseen world. You will stand to your guns like a true knight.

I, of course, stop short of regarding you as pushing matters to any unphilosophical extreme. You are not a Huxley. *He*, you will remember, admitted that if he had power to do so he

would physically repress what he considered to be false doctrine. *You* prize intellectual liberty too highly to make any such use of power. If I say you charge Lord Kelvin with being a dangerous lunatic I do not mean that you would consider it right to place him under any physical restraint. You are, on the contrary, in favor of his enjoying the same freedom as yourself. You have no desire to withhold him from forming vortices in stuff which he simultaneously states to be incapable of structure, or from saying, not only in his heart, but in his public teachings, that there is no God. You know the only right way of consuming error is to perseveringly direct upon it the rays of truth.

But the making of charges may be a mutual proceeding. Let me direct your attention to the charges made against yourself by the leaders of science in England. It seems necessary to do so, because, to judge from your letter to me of January 8th, you appear to have forgotten your address to the Society for Psychical Research and to be now under the impression that the attitude of men of science toward your discoveries has changed in your favor.

I regret to say that this impression is but a flattering unction. If men like Lankester, Stokes, Tilden, Roberts-Austen, Perry, and the ignoble army of vivisecting leaders of science could have their sweet way they would burn you at the stake to-morrow.

In *Nature* of May 5th, this year, is a review by Dr. W. Leslie MacKenzie of Mr. Frank Podmore's *Studies in Psychical Research*. How does the learned reviewer therein deal with *you?* He says, "The high-water mark in the scientific observation of spiritualism was Mr. Crookes's experiments with Home and others. . . . In regard to Mr. Crookes and his experiments Mr. Podmore is becomingly respectful; but the best critical faculty may be taken in by trickery (*e.g.*, p. 111, 'Miss Cook, Miss Fay, and other mediums with whom Mr. Crookes experimented.') Mr. Podmore concludes: 'Unless and until some feat is performed which fraud cannot explain, the presumption that fraud is the all-sufficient cause remains unshaken' (p. 124). The 'unless' and 'until' rest with spiritualism, and were it for this result alone, the S. P. R. has not worked in vain."

The charge here made against you is clear and unmistake-

[illegible]

permission to clasp her in my arms, so as to be able to verify the interesting observations which a bold experimentalist has recently somewhat verbosely recorded. Permission was graciously given, and I accordingly did—well, as any gentleman would do under the circumstances * * * * Raising the lamp I looked around and saw Katie standing close behind Miss Cook. She was robed in flowing white drapery, as we had seen her previously during the *séance.* Holding one of Miss Cook's hands in mine, and still kneeling, I passed the lamp up and down so as to illuminate Katie's whole figure, and satisfy myself thoroughly that I was looking at the veritable Katie whom I had clasped in my arms a few minutes before, and not at the phantom of a disordered brain. She did not speak but moved her head, and smiled in recognition. Three separate times did I carefully examine Miss Cook crouching before me to be sure that the hand I held was that of a living woman, and three separate times did I turn the lamp to Katie and examine her with steadfast scrutiny until I had no doubt whatever of her objective reality * * * * Before concluding this article I wish to give some of the points of difference which I have observed between Miss Cook and Katie. Katie's height varies; in my house I have seen her six inches taller than Miss Cook. Last night, with bare feet, and not tiptoeing, she was four and a half inches taller than Miss Cook. Katie's neck was bare last night; the skin was perfectly smooth both to touch and sight; whilst on Miss Cook's neck is a large blister, which under similar circumstances is distinctly visible and rough to the touch."

2. In a later article entitled, "The Last of Katie King" you wrote:

"But photography is as inadequate to depict the perfect beauty of Katie's face, as words are powerless to describe her charms of manner. Photography may, indeed, give a map of her countenance; but how can it reproduce the brilliant purity of her complexion, or the ever-varying expression of her most mobile features, now overshadowed with sadness when relating some of the bitter experiences of her past life, now smiling with all the innocence of happy girlhood when she had collected my children round her, and was amusing them by recounting the anecdotes of her adventures in India.

'Round her she made an atmosphere of life;
The very air seemed lighter from her eyes,
They were so soft and beautiful, and rife
With all we can imagine of the skies;
Her overpowering presence made you feel
It would not be idolatry to kneel.'

"Having seen so much of Katie lately, when she has been illuminated by the electric light, I am enabled to add to the points of difference between her and her medium which I mentioned in a former article. I have the most absolute certainty that Miss Cook and Katie are two separate individuals so far as their bodies are concerned. Several little marks on Miss Cook's face are absent on Katie's. Miss Cook's hair is so dark or brown as to almost appear black; a lock of Katie's, which is now before me, and which she allowed me to cut from her luxuriant tresses, having first traced it up to the scalp and satisfied myself that it actually grew there, is a rich golden auburn.

"On one evening I timed Katie's pulse. It beat steadily at 75, whilst Miss Cook's pulse a little time after was going at its usual rate of 90. On applying my ear to Katie's chest I could hear a heart beating rythmically inside and pulsating even more steadily than did Miss Cook's heart when she allowed me to try a similar experiment after the *séance*. Tested in the same way Katie's lungs were found to be sounder than her medium's, for at the time I tried my experiment Miss Cook was under medical treatment for a severe cough.

"The almost daily *séances* with which Miss Cook has lately favored me have proved a severe tax upon her strength, and I wish to make the most public acknowledgement of the obligations I am under to her for her readiness to assist me in my experiments. Every test that I have proposed she has at once agreed to submit to with the utmost willingness: she is open and straightforward in speech, and I have never seen anything approaching the slightest symptom of a wish to deceive. Indeed, I do not believe she could carry on a deception if she were to try, and if she did she would certainly be found out very quickly, for such a line of action is altogether foreign to her nature. And to imagine that an innocent school-girl of fifteen should be able to conceive and then

successfully carry out for three years so gigantic an imposture as this, and in that time should submit to any test which might be imposed upon her, should bear the strictest scrutiny, should be willing to be searched at any time, either before or after a *séance*, and should meet with even better success in my own house than at that of her parents, knowing that she visited me with the express object of submitting to strict scientific tests—to imagine, I say, the Katie King of the last three years to be the result of imposture does more violence to one's reason and common sense than to believe her to be what she herself affirms."

3. In January, 1874, you published in the *Quarterly Journal of Science* an article entitled "Notes of an Enquiry into the Phenomena called Spiritual," in which you said, "I speak chiefly of Mr. Home, as he is so much more powerful than most of the other mediums I have experimented with. *But with all I have taken such precautions as place trickery out of the list of possible explanations.*"

Compare this last sentence which you still, after an interval of 24 years, stoutly maintain to be absolutely correct, with the Lockyer dictum of a month ago that your "critical faculty" was "taken in by trickery." Very plain people will, I think, say that *Nature*, with "becoming respect," here tells the public that you are either a —— or a —— in this Katie King matter; and most members of the British Association will, if Sir J. Norman Lockyer, F. R. S., do not in the meantime publicly apologise to you, expect their President to uphold the dignity of scientific Truth in a manner which shall prove a salutary warning to all future bigots.

When you were similarly assailed on a previous occasion, your defence was ineffective. You did not *strike home!*

The occasion I refer to was when Dr. W. B. Carpenter, F. R. S., in a lecture at the Vestry Hall, Chelsea, said: "There was one fact of this kind in connection with Psychic Force which he would grapple with. Mr. William Crookes had sent a paper to the Royal Society last summer containing investigations into what he called a new force. It was returned to him by the Secretary, with a letter telling him that the Society would not refuse to receive papers on the subject, but that some kind of scientific evidence ought to be given. Mr. Crookes afterward

sent in a second series of experiments. The Secretary did not like to refuse this paper on his own responsibility, so it came before the Council of the Royal Society; it was a most unusual thing for the Council to refuse a paper sent in by a member. Mr. Crookes's second paper came before the Council a month ago, and a committee of two was appointed to examine it. They gave in their report to the Council yesterday, and it was unanimously resolved that the paper be returned to him as in the opinion of the Royal Society it was good for nothing. Anybody who had a pair of scales in the house could make an experiment to prove the fallacy of one of the points in Mr. Crookes's paper."

You thereupon entered into a correspondence with Prof. G. G. Stokes, F. R. S., and Sir Charles Wheatstone, F. R. S., on the subject, and finally you wrote to the Royal Society complaining of Dr. Carpenter's disclosure of its private proceedings. This correspondence you printed and "left to the judgment of the scientific world." The judgment was to the effect that Dr. Carpenter had misrepresented you in putting forward the scales experiment, and had misrepresented the Royal Society as to any "opinion" having been pronounced in the exact words he professed to quote. But the judgment also was that the correspondence proved the Royal Society to have "declined" *three* of your papers on the subject of psychic force and proved moreover that the declination was based upon your experimental investigation being regarded as wanting in scientific skill and accuracy.

If you were *in the right* in this case—and you still stoutly maintain that you were in the right—it is clear that your method of defence was not sufficient for your own protection. Truth is mighty, but she does not always prevail unaided. If you had been, professionally and financially, able to force the issue, the Royal Society would have had to give way, as it did in the case of Franklin and some other sturdy fighters for the right; but, as things were, you did not succeed in dispelling the cloud of bigotry exhaled across your path. Now, however, that new hoofs are lifted against you, the position is different. *You* sit in the papal chair and the world will listen to you just as reverently as it will hearken to any of the princes of the church. If then you omit to triumphantly defend yourself at Bristol it will not be for want of a favorable opportunity.

Be not deluded as to any charitable construction being put upon your failure to speak *urbi et orbi*. If you plead that such matters as Katie King are not considered to be within the province of the B. A. you will be held to have capitulated. Every "important law of matter and energy" is self-evidently a matter for investigation and discussion by the B. A.: and what more marvellously important case of the kind can exist than the smooth skin, rich golden auburn hair, rythmically beating heart, sound lungs, brilliantly-pure complexion and soft beautiful eyes of Katie King that grew into being and vanished from time to time, as repeatedly observed by you amid the surroundings of your laboratory and demonstrated by strict scientific tests? Even from one sole point of view—that of the constitution of matter—the Katie King phenomena cannot fail to prove of the most intense interest to every scientific man or woman when forcibly and convincingly described in your Bristol address; and if we look further afield and consider the light you are able thus to give us upon the questions of awful moment connected with the *control* of matter and material law we shall indeed draw conclusions in the event of our not being so illuminated.

Believe me to remain, with much admiration for your genius,

Yours Fraternally,

STEPHEN H. EMMENS,
President of the Research Society.

June 16th, 1898.

P. S.—Since writing the above I have come across a very striking instance of the damage caused by the Royal Society and *Nature* having assailed you as a scientific investigator. In *The Engineering and Mining Journal* of June 18, 1898, there is an editorial article which very adversely criticises the Cassel-Hinman Gold and Bromine Recovery Process. In this article I find the following passages:

1. "Incidentally we shall take occasion to refer to the impropriety (we use a mild term) of eminent chemists in reporting upon subjects outside of their own field of work and knowledge, the public at large (to whom one chemist is much like another) trusting to the reputation of their names and being unable to comprehend that a scientist who could discover

a new element may not be good authority upon a new metallurgical process."

2. "Sir William Crookes and Prof. William Ramsay (one of the discoverers of argon) made a joint report under date of May 26th, 1897, which would not be creditable as a thesis in a first class school of metallurgy."

This very blunt denial of your fitness to preside over the British Association would hardly have been penned had not the Royal Society disdainfully rejected your papers, and had not Sir J. Norman Lockyer, F. R. S., declared you capable of being deceived by "trickery" for years together, even in your own house and laboratory, and under experimental conditions devised and arranged by yourself.

S. H. E.

P. P. S. You will probably thank me for directing your attention to another attack on you which, by way of precedent, has doubtless had something to do with the onslaughts made by *Nature* and the *Engineering and Mining Journal*. I refer to the *Index of Spectra* compiled by W. Marshall Watts, D.Sc., F.I.C., Senior Physical Science Master in the Giggleswick School. This work you yourself mentioned to me as being *the* authority on spectrum lines; as indeed it should be, seeing that it proceeds not only from Dr. Watts, but also from a Committee appointed by the British Association at the York meeting, and consisting of Sir H. E. Roscoe, F.R.S., Sir J. Norman Lockyer, F.R.S., Prof. J. Dewar, F.R.S., Prof. Wolcott Gibbs, Prof. G. D. Liveing, F.R.S., Prof. A. Schuster, F.R.S., Prof. W. A. Hartley, F.R.S., Capt. W. de W. Abney, F.R.S., and Dr. Watts.

The attack in question is to be found in Appendix H to the *Index of Spectra*, and was published last year. It is innocent enough in appearance; but it implies that your work as a spectroscopist is so inaccurate as to be quite untrustworthy. This is attempted to be shown by what is known as the "deadly parallel;" your classical determination of the spectrum lines due to argon being quoted in comparison with the same lines as observed and measured by Kayser and Eder and Valenta.

The parallel mentions *one hundred and fifty-nine lines*, the wave-lengths of which have been erroneously measured by you. The magnitude of the errors is thus distributed:

In	1	case			12.5	Ångstroms.
"	1	"			11.7	"
"	3	"	10.2	to	10.6	"
"	3	"	8.2	"	8.6	"
"	2	"	7.1	"	7.5	"
"	4	"	6.0	"	6.9	"
"	6	"	5.2	"	5.9	"
"	5	"	4.1	"	4.91	"
"	9	"	3.16	"	3.855	"
"	21	"	2.0	"	2.801	"
"	36	"	1.0	"	1.943	"
"	68	"	0.001	"	0.991	"

The gravity of the change is strikingly apparent when we consider (1) what is claimed for spectroscopic observation generally, and (2) what you are accustomed to claim for your own work in particular.

1. In Appendix G to the *Index of Spectra* a table of "Standard Wave-lengths" is given; the values being set forth to 0.001 of an Ångstrom. This proves that skilled spectroscopists in general are supposed to attain the degree of accuracy thereby indicated.

2. In *Nature* of August 29, 1895, is quoted an article published by you in the *Chemical News* of August 23, 1895, on the spectrum of helium. In that article you said:

"The photographs were taken on plates bent to the proper curvature for bringing the whole spectrum in accurate focus at the same time. The spectrum given by a spark between an alloy of equal atoms of mercury, cadmium, zinc and tin, was photographed at the same time on the plates, partially overlapping the helium spectrum; suitable lines of those metals were used as standards. The measurements were taken by means of a special micrometer reading approximately to the 1/100,000th inch, and with accuracy to the 1/10,000th of an inch. The calculations were performed according to Sir George Stokes's formula, supplemented by an additional formula kindly supplied by Sir George Stokes, giving a correction to be applied

to the approximate wave-lengths given by the first formula, and greatly increasing the accuracy of the results."

Also in *Nature* of February 7, 1895, there appeared an abstract of your paper communicated to the Royal Society, on the "spectra of argon," in which you said, *inter alia:*

"I have been enabled to examine the spectrum of this gas in a very accurate spectroscope, and also to take photographs of its spectra in a spectrograph fitted with a complete quartz train."

In both cases—*i.e.*, helium and argon—the wave-lengths given by you were stated to 0.1 of an Ångstrom; and in the case of helium some of the values were carried to one additional decimal figure. You therefore claim for your work an accuracy of 0.01 of an Ångstrom.

But the deadly parallel makes it appear that you are sometimes "out" as much as 12.5 Ångstroms; whence the implication follows that your errors are twelve hundred snd fifty times larger than is allowable by your own standard of scientific excellence, and twelve thousand five hundred times greater than is permitted by the standard of the British Association.

I am sorry to say this is not all that is charged. The number of argon lines given in Appendix H is 1074; whereas, in your paper read to the Royal Society, you said "in the spectrum of the blue glow I have counted 119 lines, and in that of the red glow 80 lines, making 199 in all." It would seem, therefore, that the German observers are held to have noticed more than five times as many lines as you were able to discover.

Again, several cases are given where a line reported by you as single is claimed by the German observers to consist in reality of two lines separated by a relatively considerable interval.

I think you will agree with me that the attack is not lacking in adroitness. In the first place you are debarred from contesting the accuracy of the German work; for you will remember that in your discussion with me respecting the spectrum of Ar-gold you deliberately adopted the wave-lengths determined by Eder and Valenta as absolutely authoritative; and secondly your own statements to the Royal Society and in the *Chemical News* effectually preclude you, in this par-

ticular case, from gaining your favorite refuge, namely, "the difference is within the errors of experiment."

Difficulties, however, in the way of great men, are made only to be surmounted; and I feel sure many a member of the British Association is looking forward with confidence and pleasurable anticipation to seeing you at Bristol once more display your quick- witted genius and unrivalled dialectical power in demolishing the parallel advanced against you by the eminent B. A. Committee. *Rien n'est sacré pour les sapeurs.*

I hope you will not think me presumptuous if I make a suggestion. The strongest defence is to assume the offensive. Why not boldly rebuke the affectation of accuracy and the solemn mockery of mystery that disfigure so much of the so-called science of our "leaders"? Let us clear our decks of useless lumber in order that our voyage of discovery in the twentieth century may be conducted to better advantage. Let us be fairer to the laymen at large. Let us not ask them to believe that we can and do really make sure of the position of spectrum lines corresponding to a difference of one ten-thousand-millionth of a millimetre in wave-length. Let us not tell them that spectroscopy can be understood and judged of only by specialists. Let us not endeavor to frighten them away from our preserves or perhaps I ought to say, our loaves and fishes, by putting forward so straw-stuffed a bogie-man as that which bears the name of the Higher Mathematics. You know, Lord Kelvin knows, Prof. Perry knows, that a very large portion of science can be perfectly well apprehended, discussed and cultivated by persons of moderate education and good sense without requiring any knowledge of the calculus.

The truly philosophical side of the case was never better put than in the dedication to Mr. Thomas Hawksley, F. R. S., of the 1887 edition of Prof. C. M. Tidy's *Handbook of Modern Chemistry*, wherein the distinguished author said: "With respect to the names of chemical compounds, I have at times not hesitated to write in common language. If I have used the word 'potash', and the body I mean to imply thereby is understood, I am satisfied. I confess that the growing necessity for having a translation at one's side in attempting to understand the modern scientific paper, is in my opinion a circumstance to be deplored. Danger, moreover, is always to be apprehended when a language has to be invented to support

a theory or formula. A party shibboleth has, no doubt, a charm for its special clique. It serves as a bond of union for the initiated, whilst it prevents the interference of outsiders. But, all the same, it is distracting to the independent worker, and can but prove a hindrance to the general cultivation of science."

S. H. E.

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